

Appl. No.: 10/076,727  
Amdt. Dated: 11/24/2004  
Off. Act. Dated: 06/30/2004

### **REMARKS/ARGUMENTS**

#### **Introduction**

1. Applicant has carefully considered all of the Examiner's comments. Claims 1-24 are pending, and are subject to restriction and a species election requirement. Applicant responds below.

#### **Restriction Requirement and Species Election – 35 U.S.C. § 121**

2. Restriction to one of the following inventions is required by the Examiner under 35 U.S.C. 121:

- I. Claims 1-6, drawn to a micro-array device for determining adherence of selected cells, classified in class 435, subclass 288.3.
- II. Claims 7-20, drawn to methods for cell adhesion of a particular cell type on a particular membrane or surface, classified in class 435, subclass 325.
- III. Claims 21 and 22, drawn to a membrane bilayer surface forming a cell adhesion-free phospholipid bilayer surface, classified in class 435, subclass 287.9.
- IV. Claims 23 and 24, drawn to a patterned surface formed by cell adhering and non-adhering phospholipid bilayer areas, classified in class 435, subclass 288.4.

Applicant provisionally elects, with traverse, Group II claims 7-20 as required by the restriction. Claims 1-6 and 21-24 are withdrawn, with traverse, as subject to the restriction requirement.

Applicant traverses the restriction between Groups I and II based on the Examiner's reasoning that "the micro-array device can be used to culture cell" (Restriction page 3, line 3). The apparatus described in Independent claim 1, the basis for Group I, is:

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"A micro-array device for determining adherence of selected cells contacting the device to a lipid membrane of the device, comprising:

- a. an inert solid substrate;
- b. a plurality of lipid membranes arrayed on said substrate in physically separate corrals defined by barriers on the substrate, each corral sized to contact a plurality of cells moving from corral to corral;
- c. said lipid membranes forming, in each corral, a continuous, fluid sheet; and
- d. dopant molecules, present within some but not all membrane sheets of the micro-array, each molecule movable within its sheet, said dopant molecules selected for cell adhesion properties that change the binding property of the lipid membrane towards the selected cell." (underline added)

Thus, the micro-array device has "lipid membranes...in each corral", and does not have cells. There is no claim element describing cell culture. MPEP 806.05(g) states that "[t]he burden is on the examiner to provide reasonable examples that recite material differences" between claimed process and apparatus. As such, Applicant traverses the restriction as between Groups I and II, and respectfully requests reconsideration.

Should the Examiner find that Groups I and II are not subject to restriction, it is requested that withdrawn claims 1-6 be reinstated.

3. Election of species to one of the following inventions has been required by the Examiner under 35 U.S.C. 121. Applicant elects cell adhesion protein dopant molecules that are cell adhesion proteins from the immunoglobulin superfamily, as described in independent claims 7, 8 and 14 and dependent claims 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, and 20.

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4. Election of species to one of the following inventions has been required by the Examiner under 35 U.S.C. 121. The Examiner reports that claims 6, 13, and 19 are generic to disclosed patentably distinct species comprising: phosphatidylserine, dipalmitoylphosphatidic acid, distearoylphosphatidylglycerol, phosphatidylinositol, 1,2-dioleoyl-3-dimethylammonium-propane, 1,2-dioleoyl-3-trimethylammonium-propane, dimethyldioctadecylammonium bromide, 1,2-dioleoyl-sn-glycero-3-ethylphosphocholine, N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)-1,2-dihexadecanoyl-sn-glycero-3-phosphoethanolamine ammonium salt, and N-1,2-dihexadecanoyl-sn-glycero-3-phosphoethanolmine triethylammonium salt.

Applicant hereby elects phosphatidylserine.

#### **Additional Claim Fees**

5. No claims have been added, therefore there is no additional claim fee.

#### **Conclusion**

6. In view of the above, Applicant has fully responded to the Office Action. Prompt reconsideration is kindly requested of the Group I and II restriction requirement.

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Respectfully submitted,



Joseph R. Milner, Ph. D., Reg. No. 42,896  
Lawrence Berkeley National Laboratory  
One Cyclotron Road, Mail Stop 90B0104  
Berkeley, CA 94720  
(510) 486-4672